Listing of Claims/Amendments to the Claims

The following listing of claims will replace all prior versions, and listings, of claims in the above-identified patent application:

1. (Currently Amended) A method for refilling service-brake circuits in a vehicle compressed air system after rapid compressed air consumption or loss, the method comprising the steps of:

establishing pneumatic communication between:

(i) intact ones of service-brake circuits ~~of a plurality of compressed air consumer circuits~~ of said vehicle compressed air system, wherein the service-brake circuits are included in a plurality of compressed air consumer circuits, and

(ii) at least one additional compressed air consumer circuit ~~having~~ including a compressed air reservoir with pressure at least equal to pressure in said intact ones of said service-brake circuits, wherein:

said intact ones of said service-brake circuits are also in pneumatic communication with an air compressor of said vehicle compressed air system; and

said plurality of compressed air consumer circuits having electrically actuatable valves that are open when in a de-energized normal state.

2. (Currently Amended) The method according to claim 1, further comprising the steps of:

monitoring a variable of state in said service-brake circuits and in said at least one additional compressed air consumer circuit,

comparing said variable of state of said service-brake circuits and of said at least one additional compressed air consumer circuit against a predefined threshold value,

shutting off individual ones of said service-brake circuits whose variable of state is below said threshold value, and

refilling said intact ones of said service-brake circuits from said compressed air reservoir of said at least one additional compressed air consumer circuit and from said air compressor.

3. (Previously Presented) The method according to claim 2, wherein said threshold value corresponds to a value of said variable of state to be adjusted in respective ones of said compressed air consumer circuits.

4. (Currently Amended) The method according to claim 1, further comprising the step of:

interrupting communication between said at least one additional compressed air consumer circuit and said intact ones of said service-brake circuits when at least one of (i) a monitored variable of state of said at least one additional compressed air consumer circuit and said service-brake circuits are equal and (ii) an index value of said variable of state is reached in refilled ones of said service-brake circuits.

5. (Currently Amended) A system for refilling service-brake circuits in a vehicle compressed air system after rapid compressed air consumption or loss, the system comprising:

a compressed air supply part ~~having~~ including a compressor[[,]];

an electronic control unit; and

a plurality of compressed air consumer circuits including:

service-brake circuits; and

at least one additional compressed air consumer circuit[[,]]; and

wherein said service-brake circuits and said at least one additional compressed air consumer circuit ~~having~~ each include:

a compressed air reservoir[[s,]];

an electrically actuatable valve[[s]] for supplying compressed air to ~~said~~ its respective compressed air consumer circuit[[s]], wherein said electrically actuatable valve of said at least one additional compressed air consumer circuit is closed in a de-energized normal state, and wherein said electrically actuatable valves of said service-brake circuits are open in the de-energized normal state; and

a sensor[[s]] for monitoring pressure in ~~said~~ its respective compressed air

consumer circuit[[s]], and

wherein said [[an]] electronic control unit ~~for evaluating~~ is operable to evaluate electrical signals from said sensors and ~~for controlling~~ to control said electrically actuatable valves, ~~at least one of said electrically actuatable valves of said at least one additional compressed air consumer circuit being closed in a de-energized normal state, and remaining ones of said electrically actuatable valves of said compressed air consumer circuits including of said service-brake circuits being open in said de-energized normal state,~~ said electronic control unit being adapted to

(i) compare continuously measured values of a variable of state of said service-brake circuits with a threshold value,

(ii) shut off defective ones of said service-brake circuits whose measured values are below said threshold value, and

(iii) while intact ones of said service-brake circuits are in pneumatic communication with said compressor, switch said ~~at least one of said~~ electrically actuatable valves of said at least one additional compressed air consumer circuit to an open position to establish communication between said at least one additional compressed air consumer circuit and said intact ones of said service-brake circuits to refill said intact ones of said service-brake circuits from said compressor and from said compressed air reservoir of said least one additional compressed air consumer circuit.

6. (Previously Presented) The system according to claim 5, wherein said electronic control unit is adapted to switch said electrically actuatable valves of said defective ones of said service-brake circuits to a closed position when a rapid drop of said variable of state occurs.

7. (Previously Presented) The system according to claim 5, wherein a pressure level in said at least one additional compressed air consumer circuit is higher than said pressure level in said service-brake circuits.

8. (Currently Amended) The system according to claim 5, wherein ~~said~~

~~remaining ones of~~ said electrically actuatable valves of said service-brake circuits are connected to a common compressed air distributor line, said common compressed air distributor line being in communication with a compressed air supply line, said compressed air supply line being in communication with said compressor.

9. (Currently Amended) The system according to claim 5, wherein said electronic control unit is adapted to close said electrically actuatable valve of said at least one additional compressed air consumer circuit when at least one of (i) said variables of state of said at least one additional compressed air consumer circuit and said variable of state of said intact ones of said service-brake circuits are equal and (ii) said variable of state of said service-brake circuits has reached an index value.

10. (Previously Presented) The system according to claim 5, wherein said threshold value corresponds to a value of said variable of state to be adjusted in said intact ones of said service-brake circuits.

11. (Previously Presented) The system according to claim 5, wherein said electrically actuatable valves are solenoid valves.

12. (Previously Presented) The method according to claim 2, wherein said variable of state is at least one of pressure, air flow rate, air mass and energy.

13. (Previously Presented) The system according to claim 5, wherein said variable of state is at least one of pressure, air flow rate, air mass and energy.

14. (New) The method of claim 1, further comprising the step of:

decoupling at least one defective circuit of said service brake circuits from said intact ones before the step of establishing pneumatic communication.

15. (New) The method of claim 14, wherein the decoupling step comprises:

determining whether pressure in said at least one defective circuit has dropped;

testing said at least one defective circuit to identify whether a pressure drop indicates that said at least one defective circuit has failed; and

when said at least one defective circuit has failed, decoupling said at least one defective circuit from said intact ones.

16. (New) The method of claim 15, wherein testing said at least one defective circuit comprises:

briefly decoupling and re-coupling said at least one defective circuit from said intact ones;

determining whether said pressure in said intact ones has risen in response to the step of briefly decoupling and re-coupling; and

in response to determining whether said pressure in said intact ones has risen, identifying whether said at least one defective circuit has failed.

17. (New) The method of claim 16, wherein the step of briefly decoupling and re-coupling comprises:

decoupling said at least one defective circuit from said intact ones for about 0.2 seconds.